

Historic, Archive Document

Do not assume content reflects current
scientific knowledge, policies, or practices.

1.96
R31 F50

RECEIVED
MAY 6 1938
U. S. DEPT. OF AGRICULTURE

SNOW SURVEYS AND IRRIGATION WATER FORECASTS

FOR OREGON

AS OF

MARCH 1, 1938

* * *

Issued March 9, 1938
Medford, Oregon

The following data pertaining to snow surveys and irrigation water-supply forecasts are provided by the Bureau of Agricultural Engineering of the U.S. Department of Agriculture, in cooperation with the Oregon State Engineer, Oregon Experiment Station and other Federal, State and local organizations. 1/

* * *

LIBRARY
Soil Conservation Service
U. S. Department of Agriculture
Washington, D. C.

Status of valley precipitation as of October 1 to date:

Month	Oct.		Nov.		Dec.		Jan.		Feb.		Period	
Section	P	D	P	D	P	D	P	D	P	D	P	D
S.E.	.82	+ .22	1.81	+ .98	1.89	+1.03	1.25	+ .17	2.0	+1.2	7.77	+3.60
S.C.	1.48	+ .60	2.96	+1.04	3.55	+1.59	1.84	- .10	2.7	+1.4	12.53	+4.53
N.C.	1.04	+ .21	2.40	+ .76	2.41	+ .73	1.30	- .48	2.3	+1.2	9.45	+2.42
Col. Riv.	.82	- .12	2.23	+ .45	2.41	+ .79	1.06	- .58	1.7	+ .4	8.22	+ .94
Wal. Mts.	1.97	- .73	3.09	- .14	2.96	+ .44	2.16	- .32	1.9	+ .3	12.08	+ .45
Blue Mts.	1.62	+ .22	2.60	+ .69	2.26	+ .34	1.72	- .38	2.9	+1.1	11.10	+1.97
Southern	3.06	+ .87	7.61	+3.54	4.71	+ .55	4.19	+ .26	9.7	+6.6	29.27	+11.82
Area	1.54	+ .18	3.24	+1.05	2.88	+ .78	1.93	- .20	3.3	+1.7	12.92	+3.55

P - Inches precipitation.

D - Inches departure from normal.

S.E. - Southeastern Oregon range lands, Harney and Malheur Counties.

S.C. - Southcentral Oregon range lands, Lake County and Klamath County, except the Cascade Mountains.

N.C. - Northcentral Oregon wheat and range lands, Crook, Deschutes, Jefferson, Wheeler and part of Grant Counties.

Col. Riv. - Columbia River area wheat and range lands, Gilliam, Morrow, Sherman, Wasco and part of Umatilla Counties.

Wal. Mts. - Wallowa Mountain area forest and range lands, Wallowa and part of Baker County.

Blue Mts. - The Blue Mountain Forest and range area, Union and parts of Baker, Grant and Umatilla Counties.

Southern - Southern Oregon irrigated section, Jackson and Josephine Counties.

Note: Data for the last month shown above are preliminary only, as they are based on a few stations only. Data for earlier months have been corrected to include all the stations in climatological data for the area.

1	1000000	1000000
2	1000000	1000000
3	1000000	1000000
4	1000000	1000000
5	1000000	1000000
6	1000000	1000000
7	1000000	1000000
8	1000000	1000000
9	1000000	1000000
10	1000000	1000000
11	1000000	1000000
12	1000000	1000000
13	1000000	1000000
14	1000000	1000000
15	1000000	1000000
16	1000000	1000000
17	1000000	1000000
18	1000000	1000000
19	1000000	1000000
20	1000000	1000000
21	1000000	1000000
22	1000000	1000000
23	1000000	1000000
24	1000000	1000000
25	1000000	1000000
26	1000000	1000000
27	1000000	1000000
28	1000000	1000000
29	1000000	1000000
30	1000000	1000000
31	1000000	1000000
32	1000000	1000000
33	1000000	1000000
34	1000000	1000000
35	1000000	1000000
36	1000000	1000000
37	1000000	1000000
38	1000000	1000000
39	1000000	1000000
40	1000000	1000000
41	1000000	1000000
42	1000000	1000000
43	1000000	1000000
44	1000000	1000000
45	1000000	1000000
46	1000000	1000000
47	1000000	1000000
48	1000000	1000000
49	1000000	1000000
50	1000000	1000000
51	1000000	1000000
52	1000000	1000000
53	1000000	1000000
54	1000000	1000000
55	1000000	1000000
56	1000000	1000000
57	1000000	1000000
58	1000000	1000000
59	1000000	1000000
60	1000000	1000000
61	1000000	1000000
62	1000000	1000000
63	1000000	1000000
64	1000000	1000000
65	1000000	1000000
66	1000000	1000000
67	1000000	1000000
68	1000000	1000000
69	1000000	1000000
70	1000000	1000000
71	1000000	1000000
72	1000000	1000000
73	1000000	1000000
74	1000000	1000000
75	1000000	1000000
76	1000000	1000000
77	1000000	1000000
78	1000000	1000000
79	1000000	1000000
80	1000000	1000000
81	1000000	1000000
82	1000000	1000000
83	1000000	1000000
84	1000000	1000000
85	1000000	1000000
86	1000000	1000000
87	1000000	1000000
88	1000000	1000000
89	1000000	1000000
90	1000000	1000000
91	1000000	1000000
92	1000000	1000000
93	1000000	1000000
94	1000000	1000000
95	1000000	1000000
96	1000000	1000000
97	1000000	1000000
98	1000000	1000000
99	1000000	1000000
100	1000000	1000000

COMPARISON OF SNOW COVER WITH THAT OF PREVIOUS YEARS

Generally heavy storms early in February increased the snow cover very materially over the amounts reported for Oregon as of February 1, 1938. Mountain snow storage in general is now only slightly less than it was last year at this time.

For Oregon as a whole, and for elevations above 5,000 feet, of the courses reporting 13 have comparative records for 1937. Average snow water content of these courses is 94 percent of that found at the same time last year. 12 of these 13 courses have a comparative record for 1936. On these 12 courses, 1938 snow water content as of March 1 averages 72 percent of that found on the same courses at the same time in 1936. These results then show very material improvement over the situation as of February 1, 1938 (refer to February 1 Snow Survey release).

For elevations from 3,000 to 5,000 feet, there are 17 courses reporting on March 1, 1938 that have a comparative record for 1937. Average snow water content of these courses is 80 percent of that found at the same time last year. Of these 17 courses, there are 14 with a comparative record for 1936. On these 14 courses, 1938 snow water content averages 94 percent of that found on the same courses at the same time in 1936. These results for courses from 3,000 to 5,000 feet elevations then show very material improvement in the irrigation water supply outlook since February 1, 1938.

Snow reports on February 1 indicated watershed soils generally unfrozen or frozen only to depths of 3 inches or less. Between February 1 and March 1, the frost went out of the ground at numerous locations on snow courses. Most watershed soils in Oregon are now unfrozen and generally wet.

Final seasonal snow measurements will be made on all Oregon snow courses during the closing days of March and more definite water supply forecasts will be issued early in April.

THE HISTORY OF THE CITY OF BOSTON

From the first settlement in 1630 to the present time, the city of Boston has been a center of commerce and industry, and a seat of learning and religion. It has been the birthplace of many of the great men of the country, and the scene of many of the most important events in our history.

The city of Boston was founded in 1630 by a group of Puritan settlers who came from England. They were led by John Winthrop, who gave the city its name. The city grew rapidly, and by 1690 it was one of the largest cities in the colonies. It was the center of the American Revolution, and the site of many of the most important battles of the war.

The city of Boston has been a center of commerce and industry since its founding. It was the first city in the colonies to have a harbor, and it was the first city to have a shipyard. It was the first city to have a university, and it was the first city to have a public library. It has been a center of learning and religion, and a seat of many of the great men of the country.

The city of Boston has been a center of commerce and industry since its founding. It was the first city in the colonies to have a harbor, and it was the first city to have a shipyard. It was the first city to have a university, and it was the first city to have a public library. It has been a center of learning and religion, and a seat of many of the great men of the country.

The city of Boston has been a center of commerce and industry since its founding. It was the first city in the colonies to have a harbor, and it was the first city to have a shipyard. It was the first city to have a university, and it was the first city to have a public library. It has been a center of learning and religion, and a seat of many of the great men of the country.

STATUS OF RESERVOIR STORAGE AS OF FEBRUARY LAST

In the following tabulation, water storage in acre feet in some selected Oregon reservoirs as of about March 1, 1938 is compared with storage as of the same time in 1937.

Storage Reservoir	Stream Basin	Capacity Acre. Ft.	In Storage Acre Feet	
			About 3-1-38	About 3-1-37
Agency Valley	Malheur	60,000	27,670	19,950
Crane Prairie	Deschutes	55,220**	40,235	37,800
Crescent Lake	Deschutes	80,000	33,680	26,300
Emigrant Gap	Rogue	8,200	6,704	1,090
Fish Lake	Rogue	7,720	4,350	4,884
Four Mile Lake	Klamath*	14,000	11,767	8,747
Gerber	Klamath	94,000	N.R.	35,540
Hyatt Prairie	Klamath*	16,000	7,665	5,000
McKay	Umatilla	75,000	30,790	8,054
Ochoco	Crooked	47,500	14,710	2,100
Owyhee	Owyhee	715,000	N R.	630,230
Wallowa Lake	Wallowa	40,720	14,610	7,120
Warm Springs	Malheur	170,000	42,250	16,000
Willow Creek	Malheur	26,000	750	Dry

*By ditch to Rogue River side.

**40,500 by agreement.

1/ The snow measurements are made principally by State Water-masters, employees of irrigation and power companies and Oregon Highway engineers, and field personnel of the following Federal Government organizations: Forest Service, Geological Survey, Bureau of Reclamation, Biological Survey, Indian Service, National Park Service and Bureau of Agricultural Engineering. This work is otherwise conducted cooperatively with the State Engineer of Oregon, Oregon Experiment Station, Oregon, Nevada and Idaho Cooperative Snow Surveys, and with the U.S. Weather Bureau.

2/ Water content determined by melting a measured sample.
(The California Oregon Power Company Station).

TRIBUTARY BASINS		LOCATION		SNOW COVER MEASUREMENTS About March 1, 1938				AVERAGE WATER DEPTH (INCHES)			
(Primary & Secondary & Snow Courses)	Oregon Number	Sec.	Twp. Range	Elev.	Date	Avg. Snow Depth (In.)	Avg. Water Depth (In.)	One Month ago (2-1-38)	One Year ago (3-1-37)	Two Years ago (3-1-36)	
UPPER COLUMBIA DRAINAGE											
LOWER SNAKE IN OREGON											
OWYHEE RIVER											
Big Bend	Nev.	30	45N	56E	6800	3-4	30.0	8.5	-	16.4	
Fry Canyon	Nev.	32	43N	54E	6800	3-2	25.0	7.2	10.0	18.1	
Gold Creek Ranger Sta.	Nev.	32	45N	56E	6600	3-4	11.0	4.8	7.7	11.1	
Granite Peak	Nev.	27	44N	39E	8600	3-4	41.4	13.5	7.9	13.5	
Lower Buckskin	Nev.	25	45N	39E	6800	3-3	27.4	8.1	8.3	11.0	
Lower Jack Creek	Nev.	19	42N	53E	7000	2-28	7.5	2.2	4.5	8.2	
Martin Creek	Nev.	24	44N	39E	7000	3-1	27.2	8.1	6.0	7.9	
Rodeo Flat	Nev.	31	43N	54E	7000	3-2	21.0	6.5	8.6	18.8	
Silver City	Idaho	6	5S	3W	6400	2-27	16.6	7.1	-	-	
Taylor Canyon	Nev.	32	39N	53E	5200	3-1	17.0	4.9	7.8	10.3	
Upper Buckskin	Nev.	14	45N	39E	8200	3-2	22.2	7.2	6.8	13.3	
Upper Jack Creek	Nev.	9	42N	53E	7800	2-28	16.0	4.5	7.3	15.4	
South Mountain	Idaho	19	9S	5W	5100	2-27	2.1	0.9	-	7.6	
MALHEUR RIVER											
Blue Mountain Spring	133	21	15S	35E	5900	2-26	41.4	19.0	15.3	18.6	
Rock Spring	134	23	18S	32E	5100	2-28	15.3	5.5	7.9	10.4	
Lake Creek	136	10	16S	33E	5120	2-28	30.3	10.8	-	-	
Crane Prairie	137	24	16S	34E	5375	2-27	23.5	8.1	4.1	-	
BURNT RIVER											
Blue Mountain Summit	141	6	12S	36E	5098	2-28	21.5	6.7	9.3	10.5	
Tipton	142	34	10S	35½E	5100	2-28	26.8	8.0	-	-	

11	185	25 15 05 02 02 27	...	29 12
12	186	25 15 05 02 02 27	...	29 12
13	187	25 15 05 02 02 27	...	29 12
14	188	25 15 05 02 02 27	...	29 12
15	189	25 15 05 02 02 27	...	29 12
16	190	25 15 05 02 02 27	...	29 12
17	191	25 15 05 02 02 27	...	29 12
18	192	25 15 05 02 02 27	...	29 12
19	193	25 15 05 02 02 27	...	29 12
20	194	25 15 05 02 02 27	...	29 12
21	195	25 15 05 02 02 27	...	29 12
22	196	25 15 05 02 02 27	...	29 12
23	197	25 15 05 02 02 27	...	29 12
24	198	25 15 05 02 02 27	...	29 12
25	199	25 15 05 02 02 27	...	29 12
26	200	25 15 05 02 02 27	...	29 12
27	201	25 15 05 02 02 27	...	29 12
28	202	25 15 05 02 02 27	...	29 12
29	203	25 15 05 02 02 27	...	29 12
30	204	25 15 05 02 02 27	...	29 12

TRIBUTARY BASINS (Primary & Secondary & Snow Courses)	LOCATION			SNOW COVER MEASUREMENTS About March 1, 1938			AVERAGE WATER DEPTH (INCHES)				
	Oregon Number	Sec. Twp. Range	Elev.	Date	Avg. Snow Depth (In.)	Avg. Water Depth (In.)	One Month ago (2-1-36)	One Year ago (3-1-37)	Two Years ago (3-1-36)		
POWDER RIVER											
Bourne	154	33	8S	37E	5800	2-27	43.4	14.1	9.9	10.2	16.0
Filbertson Meadows	151B	18	8S	38E	5400	2-28	31.4	11.5	5.0	-	-
GRANDE RONDE RIVER											
Moss Spring	186	27	3S	41E	5860	2-28	57.6	19.6	13.3	-	-
UMATILLA RIVER											
L O W E R C O L U M B I A D R A I N A G E											
Emigrant Springs	222	29	1N	35E	4600	2-25	15.3	5.2	1.0	-	14.2
Near Meacham	221	24	1S	35E	4600	2-25	19.2	6.7	2.1	-	16.1
JOHN DAY RIVER											
Beech Creek Summit	246A	4	12S	30E	4912	2-28	16.0	6.9	2.0	10.7	9.3
Blue Mountain Spring	133	21	15S	35E	5900	2-26	41.4	19.0	9.0	15.3	18.6
Blue Mountain Summit	141	6	12S	36E	5098	2-28	21.5	6.7	1.8	9.3	10.5
Izee Summit	964	28	16S	29E	5293	2-26	17.0	6.7	1.7	8.3	11.0
Olive Lake	245	14	9S	33½E	6000	2-27	43.4	16.2	8.7	16.0	20.7
Starr Ridge	247	20	15S	31E	5193	2-26	13.4	3.3	0.9	7.3	7.5
DESCHUTES RIVER											
Marion Creek	344	25	12S	19E	4540	2-26	15.0	4.8	0.9	-	-
Ochoco Meadows	341	21	13S	20E	5200	2-26	31.0	10.0	-	13.6	13.5

TRIBUTARY BASINS		LOCATION		SNOW COVER MEASUREMENTS				AVERAGE WATER DEPTH (INCHES)			
(Primary & Secondary & Snow Courses)	Oregon Number	Sec. Twp. Range	Elev.	About March 1, 1938				One Month ago (2-1-38)	One Year ago (3-1-37)	Two Years ago (3-1-36)	
				Date	Avg. Snow Depth (In.)	Avg. Water Depth (In.)					

SANDY RIVER

Still Creek	451	25	3S	8 $\frac{1}{2}$ E	3700	3-1	34.1	12.8	6.1	-	-
Mt. Hood	452	6	3S	9E	5600	3-1	101.5	42.8	31.8	-	-

CLACKAMAS RIVER

Peavine Ridge	591	14	6S	7E	3500	3-1	36.8	13.0	6.5	-	-
Clackamas Lake	592	35	5S	8 $\frac{1}{2}$ E	3400	3-1	27.6	10.2	4.6	-	-

HARNEY BASIN

Idylwild Camp	961A	33	20S	31E	5200	2-28	15.6	6.1	1.6	5.7	10.9
Izee Summit	964	28	16S	29E	5293	2-26	17.0	6.7	1.7	8.3	11.0
Rock Spring	134	23	18S	32E	5100	2-28	15.3	5.5	1.3	7.9	10.4
Starr Ridge	247	20	15S	31E	5193	2-26	13.4	3.3	0.9	7.3	7.5

UMPQUA RIVER

Diamond Lake	743	29	27S	6E	5315	2-24	62.6	18.2	7.9	21.2	-
--------------	-----	----	-----	----	------	------	------	------	-----	------	---

ROGUE RIVER

Annie Spring	831	19	31S	6E	6018	2-28	114.1	41.6	22.8	37.8	52.1
Billie Creek Divide	722	17	36S	5E	6000	2-26	49.6	18.4	9.2	27.4	36.3

I N T E R I O R D R A I N A G E

W E S T C O A S T D R A I N A G E

11		855			
12	2	855			
13	3	855			
14	4	855			
15	5	855			
16	6	855			
17	7	855			
18	8	855			
19	9	855			
20	10	855			
21	11	855			
22	12	855			
23	13	855			
24	14	855			
25	15	855			
26	16	855			
27	17	855			
28	18	855			
29	19	855			
30	20	855			

11 12 13 14 15 16 17 18 19 20
 21 22 23 24 25 26 27 28 29 30
 31 32 33 34 35 36 37 38 39 40
 41 42 43 44 45 46 47 48 49 50
 51 52 53 54 55 56 57 58 59 60
 61 62 63 64 65 66 67 68 69 70
 71 72 73 74 75 76 77 78 79 80
 81 82 83 84 85 86 87 88 89 90
 91 92 93 94 95 96 97 98 99 100

TRIBUTARY BASINS

LOCATION

SNOW COVER MEASUREMENTS
About March 1, 1938

AVERAGE WATER DEPTH (INCHES)

(Primary & Secondary & Snow Courses)	Oregon Number	Sec. Twp. Range	Elev.	Date	AVG. Snow Depth (In.)	AVG. Water Depth (In.)	One Month ago (2-1-38)	One Year ago (3-1-37)	Two Years ago (3-1-36)
---	------------------	-----------------	-------	------	--------------------------------	---------------------------------	---------------------------------	--------------------------------	---------------------------------

Fish Lake	725	3	37S	4E	4865	3-3	31.2	11.6	17.2	19.2
Hyatt Prairie Reservoir	723	15	39S	3E	4900	3-1	35.4	12.6	15.0	11.4
Silver Burn	7219	30	30S	4E	3720	2-27	45.0	16.1	16.3	-
Siskiyou Summit	728	17	40S	2E	4630	2-26	34.9	11.3	14.5	-
South Fork Canal	7218	12	33S	3E	3500	2-28	18.8	6.8	11.6	-
Wagner Butte	7213	1	40S	1W	6800	2-26	51.1	16.7	-	-

KLAMATH LAKE BASIN

Annie Spring	831	19	31S	6E	6018	2-28	114.1	41.6	22.8	37.8	52.1
Beatty 2/		22	36S	12E	4300	2-28	0.0	9.0	0.0	1.5	0.0
Billie Creek Divide	722	17	36S	5E	6000	2-26	49.6	18.4	9.2	27.4	36.3
Chemult No. 1	834	21	27S	8E	4760	2-28	38.4	12.5	4.1	10.5	-
Chemult No. 2 2/		21	27S	8E	4761	2-28	31.0	12.0	5.1	10.2	12.5
Chiloquin 2/		34	34S	7E	4187	2-28	9.5	4.4	1.7	4.0	2.0
Crystal 2/		26	34S	6E	4200	2-28	23.0	6.5	1.7	10.5	11.5
Fort Klamath 2/		22	33S	7E	4150	2-28	18.5	8.6	2.5	8.2	7.4
Hyatt Prairie Reservoir	723	15	39S	3E	4900	3-1	35.4	12.6	3.5	15.0	11.4
Kirk 2/		1	33S	7E	4533	2-28	22.0	7.0	2.1	9.5	14.6
Lake of the Woods No. 1	835	11	37S	5E	4960	2-28	34.0	10.2	3.3	9.4	-
Quartz Mountain 2/		33	37S	16E	5504	2-28	29.0	10.5	3.4	7.2	9.8
Pelican 2/		10	36S	6E	4200	2-28	11.0	4.0	1.0	7.0	3.2
Richardson Ranch 2/		22	35S	14E	4800	2-28	8.7	3.2	1.9	4.7	4.0
Rocky Point 2/		26	35S	6E	4150	2-28	17.5	4.2	1.0	9.2	3.9
Summer Rim	841	15	33S	16E	7200	2-28	44.0	15.2	-	-	-
Sun Mountain	836	22	32S	7E	5350	2-26	70.5	24.4	10.9	-	-
Yamsey 2/		19	30S	11E	4600	2-28	11.0	3.0	0.5	8.4	2.0
Strawberry	837	4	40S	16E	5600	2-27	28.6	8.8	4.0	-	-

GOOSE LAKE BASIN

Quartz Mountain 2/	837	33	37S	16E	5504	2-28	29.0	10.5	3.4	7.2	9.8
Strawberry		4	40S	16E	5600	2-27	28.6	8.8	4.0	-	-

